

# Work Order ID 74310

Wednesday, September 28, 2011 11:37:15 A



Page 1

Item ID: D3690-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Glareshield

Start Date: 9/28/2011 Start Qty: 2.00



Cust Item ID:

Required Date: 10/14/2011 Req'd Qty: 2.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: M L J

Date: 9/29/11

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3690

Rev C

100

0.00



HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

Thermoforming Machine

Set up machine frame and program as per Folio FTA 019

WL  
11/12/20

110

0.00



HAND FINISHING THERMOFORMING

Thermoform

Memo

0.00

Thermoforming Machine

Cut Blanks to fit frame size 69.5" X 35.5"

x 2

WL  
11/12/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

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Date:

Run Start




QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
115  HandThermo	Dry Material	0.00							
Hand Finishing Thermoforming	<b>Memo</b> Dry Sheet as per QSI022 POLYCARBONATE Temp: <u>2:40.°F</u> Time IN: <u>3:15 pm</u> Time OUT: <u>2:00 am</u>	0.00				x2			11/12/20 JH
120  Thermoform	THERMOFORMING MACHINE	0.00							
Thermoforming Machine	<b>Memo</b> Thermoform as per Dwg. D3690-1 and Folio FTA 019 LIDwg. Rev. <u>C</u> Folio Rev. <u>C</u>	0.00				x2			11/12/20 JH
130  QC	QC2- Inspect parts off machine FAI/FAIB	0.00							
Quality Control	<b>Memo</b> Visually inspect for proper formation of each part	0.00				x2			11/12/20 JH

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Cust Item ID:

Required Date: 10/14/2011 Req'd Qty: 2.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140  QC Quality Control	QC8- Inspect parts - second check  Memo	0.00 0.00				(72)			
150  Thermoform Thermoforming Machine	HAND FINISHING THERMOFORMING  Memo Trim to Finished Dimensions as per dwg D3690 using DT9036 / DT9043 template	0.00 0.00				x2			OK 11/12/20
160  QC Quality Control	QC2- Inspect parts off machine FAI/FAIB  Memo Check dimensions to ensure conformity to drawing tolerances.	0.00 0.00				x2			OK 11/12/20

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Cust Item ID:

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Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

5 u/12/22

180

Identify as per dwg & Stock Location: GA

0.00



Packaging

Memo

0.00

Packaging

Sp 1407/19

②

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

12/3/20  
ME  
12-03-19

W/O:		WORK ORDER CHANGES					
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**NOTE:** Date & initial all entries



# Picklist Print

Wednesday, September 28, 2011 11:37:13 AM

Page 1

Work Order ID: 74310



Parent Item: D3690-1

Parent Item Name: Glareshield

Start Date: 9/28/2011

Required Date: 10/14/2011

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev A New Issue 08/04/28 DL verified by:DD  
IPP Rev:B 08-07-14 revB as per dwg DD verified by:ec  
IPP Rev:C 08-10-07 revC as per dwg DD verified by:EC Ipp Rev. D  
Add Step 115 Dry Material 10/04/21 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MLEXS.093-F6006-02

Purchased

No

sf

650.6276

52.64632



GE PLASTICS LEXAN SHEET

Location

Loc Qty

Loc Code

therm

650.62758

106751

105.89

110877

544.73758

52.65 sq ft.

PL  
12/03/19

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 74310
<b>Description:</b> Glareshield		<b>Part Number:</b> D3690-1
<b>Inspection Dwg:</b> D3690	<b>Rev:</b> C	<b>Page 1 of 1</b>

**FIRST ARTICLE INSPECTION CHECKLIST**  
**THERMOFORMING SECTION**

Description	Accept	Reject	Method of Inspection	Comments
Shape Definition	✓			
Free of visual flaws (bumps, cracks, voids, etc.)	✓			

<b>Measured by:</b> DL	<b>Date:</b> 11/12/20
------------------------	-----------------------

**TRIMMING SECTION**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.20	+/-0.030	2.21"	✓			
3.55	+/-0.030	3.57"	✓			
0.040	Min	0.080"	✓			

<b>Measured by:</b> DL	<b>Date:</b> 11/12/22
<b>Audited by:</b> S	<b>Date:</b> 11/12/22
<b>Preliminary Approval:</b>	<b>Date:</b>

Rev	Date	Change	Revised by	Approved
A	08.09.12	New Issue	KJ/DL	DL
B	10.11.17	Dwg Rev updated	KJ	DL

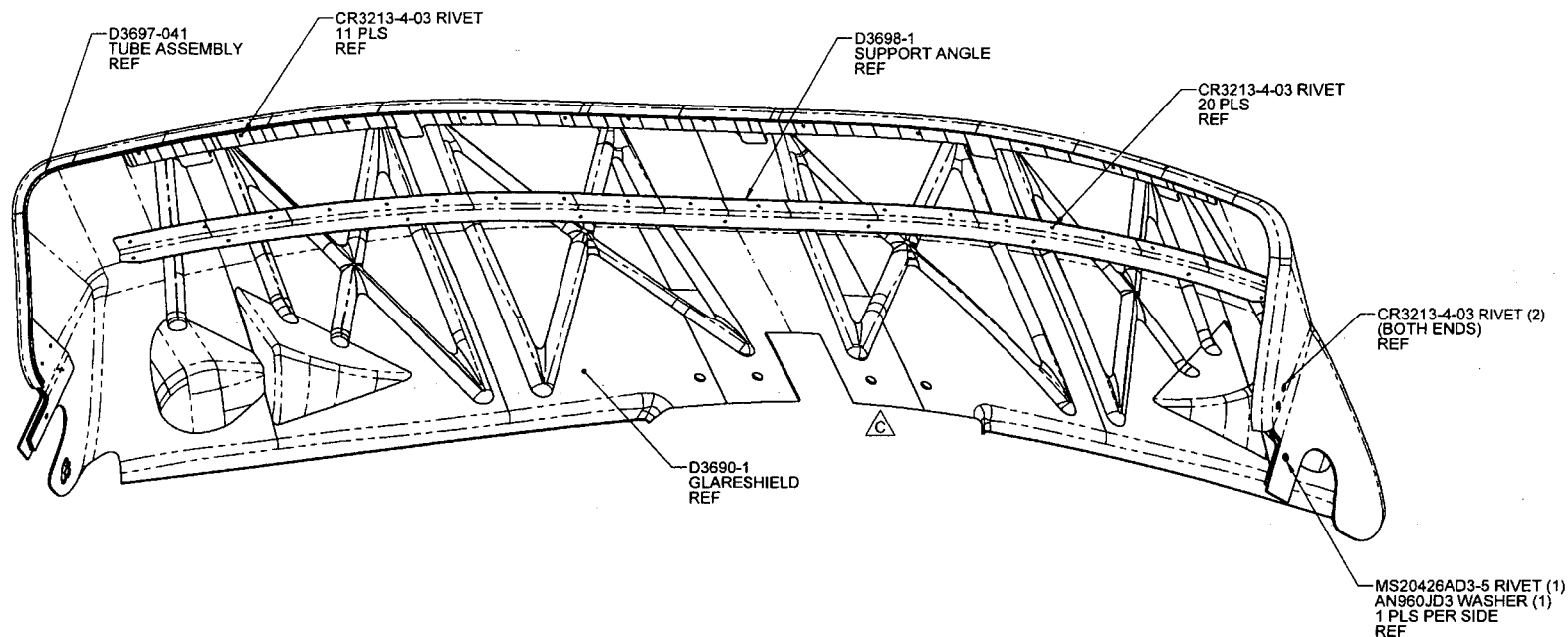
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# PART LIST

QTY -041	PART NUMBER	DESCRIPTION
X	D3690-041	GLARESHIELD ASSEMBLY
1	D3690-1	GLARESHIELD
1	D3697-041	TUBE ASSEMBLY
1	D3698-1	SUPPORT ANGLE
2	AN960JD3	WASHER (OR NAS1149DN332J)
2	MS20426AD3-5	RIVET
35	CR3213-4-03	RIVET

## D3690-041 GLARESHIELD ASSEMBLY

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 74310 M.L. J. 9/29/11

C	SHEET 1 PL MS20426AD3-5 RIVET WAS MS20426AD3-4, CR3213-4-03 RIVET WAS MS20470AD3-4, WASHER QTY WAS 6 (VIEWS UPDATED ACCORDINGLY). RIVETS ON SHEET 1 CHANGED TO REF QTY. RIVETS ON SHEET 2 CHANGED TO "HARD" CALLOUTS. SHADING REMOVED FROM ALL VIEWS FOR CLARITY.	AJS	08.09.02
B	ADD FINISH COAT & 1.0 TYP. SHEET 2 ZONES A, B & C.5; ADD MIN THICKNESS. SHEET 3 ZONE A, B	RF	08.06.24
A	NEW ISSUE	RF	08.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	J	DRAWING NO.	REV. C
MFG. APPR.	E	D3690	SHEET 1 OF 3
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	GLARESHIELD ASSEMBLY	NTS
DATE	08.09.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED  
28-09-11

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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74310

TRANSFER DRILL  $\varnothing 0.128$   
FROM D3698-1 TO D3690-1  
INSTALL  
CR3213-4-03 RIVET, 20 PL  
RIVET HEAD ON GLARESHIELD  
OUTSIDE SURFACE

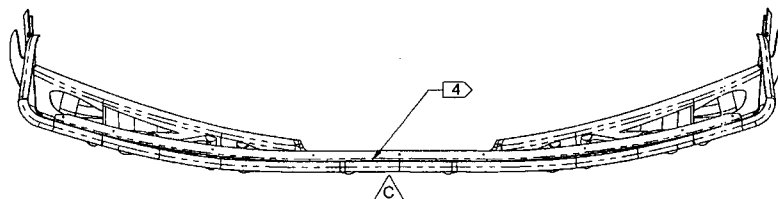
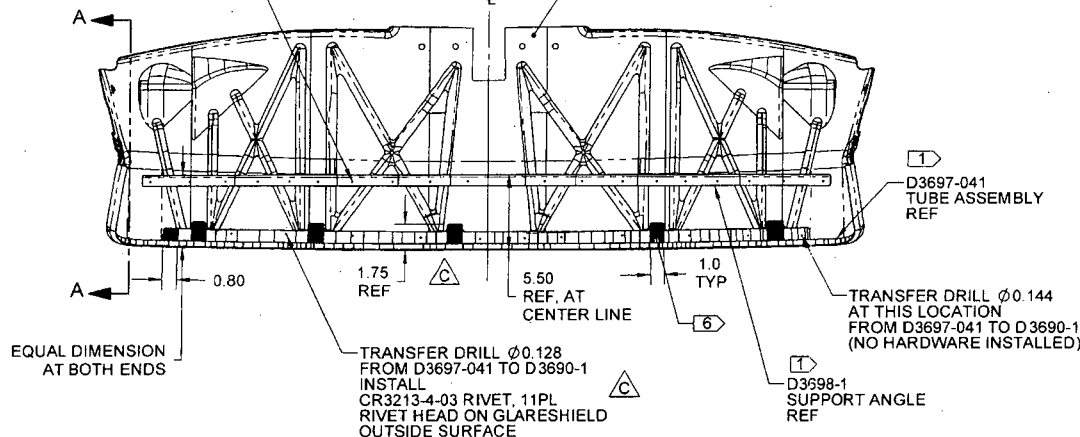
D3690-1  
GLARESHIELD  
REF

TRANSFER DRILL  $\varnothing 0.098$   
FROM D3697-041 TO D3690-1  
INSTALL  
MS20426AD3-5 RIVET  
AN960J03 WASHER (ON GLARESHIELD  
OUTSIDE SURFACE)  
1 PER SIDE

TRANSFER DRILL  $\varnothing 0.128$   
FROM D3697-041 TO D3690-1  
INSTALL  
CR3213-4-03 RIVET 2  
BOTH ENDS

0.14  
REF

# SECTION A-A







**D3690-041 GLARESHIELD ASSEMBLY**

RELEASED  
08-09-14

## NOTES:

- 1) CENTER D3697-041 AND D3698-1 ON TO D3690-1
- 2) FINISH: PAINT D3690-041 ASSY FLAT BLACK USING BASF GLASURIT 22 LINE CODE SFA39.50 PER DART QSI 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) IDENTIFICATION: ETCH WITH DART P/N D3690-041 & B/N ON INSIDE OF PART
- 5) WEIGHT: 2.98 lbs
- 6) MASK HATCHED AREAS (6 PLS) ON INSIDE OF THE PART PRIOR TO PAINTING

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3690	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		GLARESHIELD ASSEMBLY	NTS
DATE	08.09.02	COPYRIGHT © 2008 BY DART AEROSPACE LTD	
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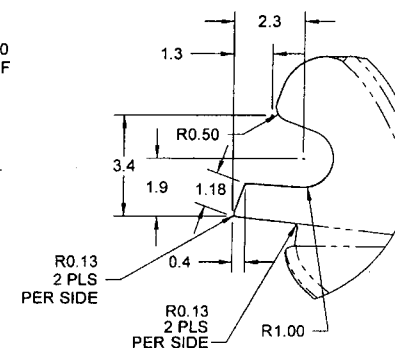
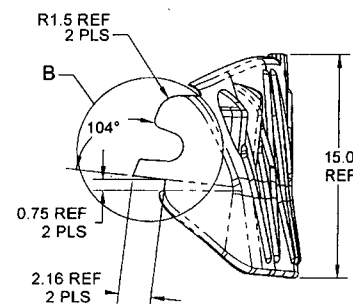
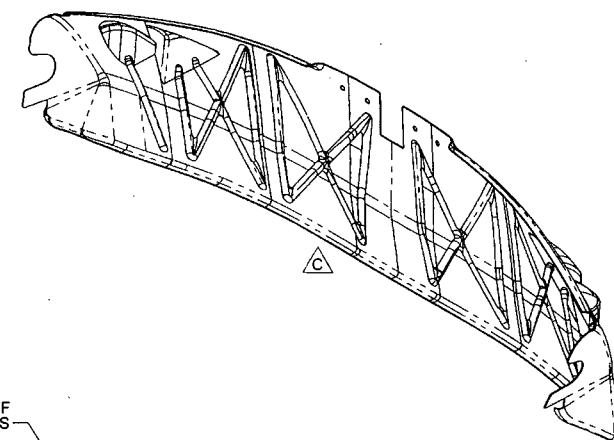
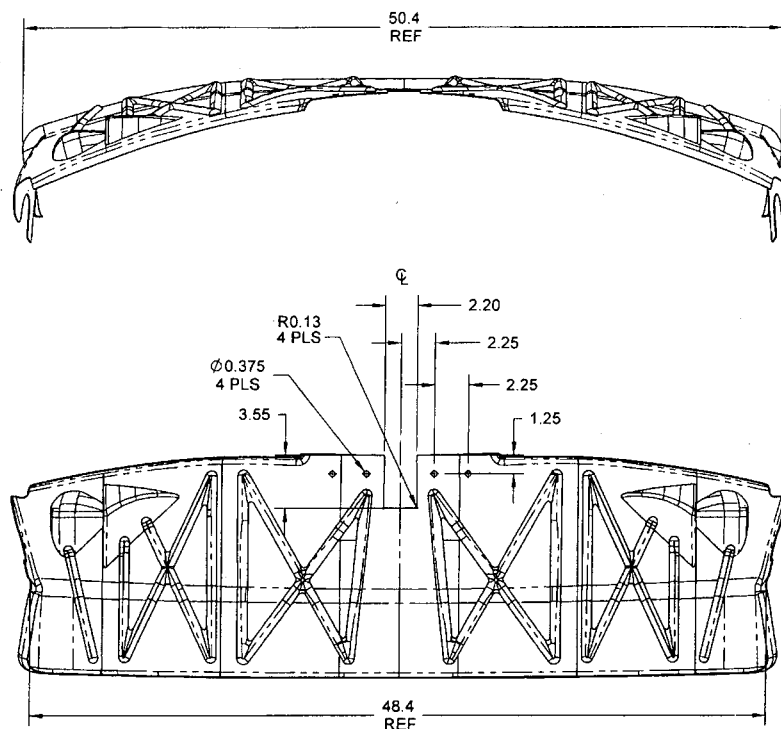
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**D3690-1 GLARESHIELD****NOTES:**

- 1) MATERIAL: F6006 SUEDE/POLISHED 701 BLACK FLAT LEXAN SHEET 0.093 THICK  
(REF DART SPEC MLEXS.093-F6006-02)
- 2) TOOLING: THERMOFORM PER MOLD DT9010 PER QSI 022  
TRIM PER MOLD SCRIBE LINES EXCEPT WHERE NOTED
- 3) FINISH: NONE
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 2.5 lbs
- 9) MINIMUM THICKNESS AFTER FORMING IS 0.040

RELEASED  
08.09.02**DETAIL B**  
SCALE 2X  
THIS VIEW FOR REFERENCE ONLY

DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
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